

REMARKS

Claims 3, 7, 9-10 and 17 were examined by the Office, and in the Office Action of January 23, 2009 all claims are rejected. With this response no claims are amended, added or cancelled. Applicant respectfully requests reconsideration and withdrawal of the rejections in view of the following discussion.

Claim Rejections under 35 USC §103

In section 7, on page 3 of the Office Action, claims 3, 7, 9, 10 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nishiguchi et al. (JP 09-324096, referred to as Nishiguchi'096 hereinafter) in view of Nishiguchi et al. (JP 10-060207, referred to as Nishiguchi'207 hereinafter) and Hirata et al. (JP 2001-316491, referred to as Hirata hereinafter). Applicant respectfully submits that claim 3 is not disclosed or suggested by the cited references, because the cited references fail to disclose or suggest all of the limitations recited in claim 1. The physical properties of the film described by Nishiguchi'096 is distinct from the physical properties of the present invention, as recited in claim 3. Furthermore, the plasticizer of the present invention is distinct from the plasticizer described in Nishiguchi'096. In addition, the polyvinyl alcohol (PVA) film discussed in Hirata is used as a polarizing film, and is distinct from the water-soluble film recited in claim 3. Therefore, for at least these reasons, claim 3 is not disclosed or suggested by the cited references, alone or in combination, and applicant respectfully requests withdrawal of the rejection to claim 3.

Claim 3 recites a polyvinyl alcohol film formed from a resin composition. The resin composition comprises: (A) a polyvinyl alcohol resin, (B) an inorganic filler, and (C) a plasticizer, the plasticizer contains trimethylolpropane. Claim 3 further specifies that the polyvinyl alcohol resin (A) comprises two kinds of resins: a first polyvinyl alcohol resin (a1) having a degree of hydrolysis of not less than 55% by mole to less than 82% by mole, and a second polyvinyl alcohol resin (a2) having a degree of hydrolysis of not less than 82% by mole to not more than 99.99% by mole. A ratio of the first polyvinyl alcohol resin (a1) to the second polyvinyl alcohol resin (a2) is from 55/45 to 80/20 by weight, and a difference in

degree of hydrolysis between the first polyvinyl alcohol resin (a1) and the second polyvinyl alcohol resin (a2) is at least 3% by mole. The polyvinyl alcohol film of the present invention is further characterized in that it dissolves in water at 20°C within 10 minutes, has an α/β ratio of not more than 10, in which α is a storage modulus of the film at 20°C in a dry atmosphere and β is a storage modulus of the film at 20°C and 80% RH, and a glass transition temperature of not more than 20°C.

Nishiguchi'096 discloses a water-soluble polyvinyl alcohol film. The film is made with a polyvinyl alcohol (PVA) resin composition which comprises a denaturation PVA resin (component A) and a PVA resin (component B). The component A (denaturation PVA) has a degree of saponification (i.e. degree of hydrolysis) of 70-99 mol.%. The weight ratio of the component B to the component A is 95:5-5:95 (Abstract). The component B has a degree of saponification of 70-99 mol.%, preferably 80-95 mol.% (paragraph [0019]). Nishiguchi'096 further discloses that the PVA resin (component B) is an unmodified PVA resin. Therefore, Nishiguchi'096 is very clear in stating that these two kinds of resins are different in molecular structures, one being modified (having an additional anionic group) and one being unmodified (see Abstract). Nishiguchi'096 further teaches that a plasticizer, suitable for the usual PVA film, may be used (paragraph [0026]).

However, the water-soluble film discussed in Nishiguchi'096 includes the denaturation PVA, which is a modified PVA containing an anionic group. Therefore, component A of the PVA resin composition discussed in Nishiguchi'096 is distinct from a normal unmodified PVA resin. In the present invention, as recited in claim 3, there are no modified PVA resins, but instead two kinds of PVA are blended, and one of them has a low degree of saponification between 55 to 82 mole % to obtain the required water solubility. In the present invention (claim 3), the PVA resin (A) is a mixture of a first PVA resin (a1) and a second PVA resin (a2). This composition is not the same as the PVA resin composition (component A + component B) of Nishiguchi'096. Accordingly, the modified PVA resin (component A) of Nishiguchi'096 is distinct from either of the unmodified PVA resins recited in claim 3.

Furthermore, Hirata discloses that trimethylolpropane may be used as a plasticizer for a polyvinyl alcohol film, and the preferably the content of the plasticizer is 1 to 30% by weight of the polyvinyl alcohol film. However, the PVA film of Hirata is composed of only one polyvinyl alcohol, which is distinct from the present invention as recited in claim 3, which states that the PVA film is comprised of two PVA resins. In addition, the expected result of Hirata is to supply a PVA film having poor water solubility, for example as described in claim 1 of Hirata. The PVA film of Hirata is used as a component of a polarizing film, and the poor water solubility of the PVA film is an essential property of the film disclosed by Hirata. In contrast, the expected results of Nishiguchi'096 is to improve the water solubility of a PVA film or to obtain a film that is quickly water-soluble. Therefore, since the objectives of Hirata and Nishiguchi'096 are so disparate, one of skill in the art would not be motivated to combine the teachings of the references to arrive at the limitations recited in claim 3. Accordingly, applicant respectfully disagrees with the Examiner's assertion on page 4 of the Office Action that the plasticizers discussed in Hirata are functional equivalents, and can be substituted for each other. Hirata specifically states that diglycerol, ethylene glycol and glycerin are suitably used from a ductility improved effect. Therefore, Hirata recognizes that there are distinctions between diglycerol, ethylene glycol and glycerin and the other plasticizers mentioned, namely trimethylolpropane, and accordingly the plasticizers are not exact equivalents as asserted by the Office.

Therefore, since the PVA film of Nishiguchi'096 has another structure from the PVA film of the present invention, as recited in claim 3, and the PVA film of Hirata has a saponification degree not less than 97 mole %, because it is requires that the film of Hirata obtain water-resistant property to use as a polarizing film, even the combination of the cited references does not produce all of the limitations recited in claim 3, since claim 3 requires the blending of two different kinds of PVA, and one of them has a low degree of saponification between 55 and 82 mole % to obtain water-solubility.

Based on the above reasons, the rejection of claim 3 under 35 USC 103(a) is clearly improper, and withdrawal of the rejection is respectfully requested. Other claims depend directly or indirectly from claim 3. Since claim 3 is patentable, these claims are also

patentable at least due to their dependency. Applicant respectfully requests the rejections under 35 USC §103(a) be reconsidered and withdrawn.

Conclusion

For at least the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to charge Deposit Account No. 23-0442 for any fee deficiency required to submit this response.

Respectfully submitted,



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